

STEWART (J. P.)

EVOLUTION,

FROM

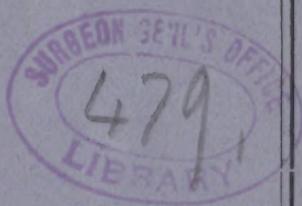
A Scientific Standpoint,

BY

JOHN POPE STEWART, M. D.,

OF

ATTALLA, ALABAMA.



President of the Etowah County Medical Society, Junior Councillor of
the Alabama Medical Association, Vice-President of the
Tri-State Medical Association of Alabama,
Georgia and Tennessee.

[Read before the Tri-State Medical Association at its Annual Meeting, Oct.
27th, 28th and 29th, 1891, in the City of Chattanooga, and printed by request
of the Executive Committee of the same.]

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EVOLUTION

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A SCIENTIFIC STANDPOINT

Evolution is not a medical question per se I well know. But it is a question that involves all the works of science within its compass, and it is a question that has interested the minds of all the deep thinkers of our profession for some time past, and has agitated, to a certain degree, society throughout the civilized and educated world, and has made itself felt through Christendom. So it behooves us as a medical and scientific body to take a glance at the reasonings and principles of this doctrine, What is Evolution?

I mean by Evolution that doctrine in Physiology and Biology which teaches the origin of the world's formation and of the various species of living things. Evolution claims that this terrestrial sphere, with all its perfections and seeming imperfections, that rolls its endless way through boundless space, with calculated precision and wonderful exactitude, that volves and revolves its 365 1-4 times during its annual oscillation, invariably with never ending continuity, has attained its present state of high development, position and condition by a gradual process of change, this change covering a period of millions of years, and, governed alone by chance, this chance developing our mother earth from unorganized homogeneity into organized complexity.

Evolution tells us that the world at one time was a ball of burning matter, sputtering and sparkling like the white, hot iron from the blacksmith's forge, flung at random from some greater body, possibly the sun, into limitless space to wander where it listeth. After wandering about for a few millions of years, it gets into a certain beaten path, which it has since ever faithfully followed, and now it begins to cool down. This cooling process has gone (and is still going) until at the present time we have a crust on the surface of this fire ball estimated at 130,000 feet.

They have divided the Evolution of this crust into Epochs, five

in number; the first they call the Archilithic or Primordial Epoch, in which 70,000 feet of strata was formed; the second is called the Paleolithic or Primary Epoch, in which 42,000 feet of strata humps up; the third is called the Mesolithic or Secondary Epoch, in which 15,000 feet of terra firma is given us; the fourth is the Canolithic or Tertiary Epoch, forming for us 3,000 feet more; the fifth the Anthropolithic Man or Quarternary Epoch is the present and last. This is the "upper crust," the finest, the best. No estimate has been made, as yet, how many feet of "worldly stuff" has accumulated, formulated or evolved since this epoch has been inaugurated. Some thousands of years hence our progeny, whatever they may be, for we once were monkeys, and monkeys once were worms, and worms once were nixy. So if this evolution business goes on, and the world exists, what may our progeny become? But, nevertheless, some thousands of years hence our progeny may figure out the thickness of the "upper crust" as evolved during the Anthropolithic or Man Epoch; and thus our world was formed, that is, this is its evolution, from a ball of fire, but from whence this ball of fire? They do not say, unless it's from the sun, and from whence the sun? Their answer is, "You make me tired."

I hope I haven't made my hearers tired with this necessary prologue. I will now enter into my subject, "The Evolution of Man," in earnest. Darwin says that man sprang from the ape, the ape from the monkey, the monkey from the kangaroo and so on down to the bottom of the pack. Wolff, Baer, Lamerick, Huxley, Haeckel, and a hundred more, have tried to ape him in making us all apes.

The evidence in proof of Evolution may be grouped under the following eight headings, which I will give, and then take up in detail:

1st. The evidence from the geographical distribution of animals and plants.

2nd. The evidence from the geological succession of animals and plants.

3rd. The evidence from homology or fundamental similarity of plan.

4th. The evidence from rudimentary organs.

5th. The evidence from embryology.

6th. The evidence from classification.

7th. The evidence from variation.

8th. The evidence from organisms, which have modified under domestication.

Before entering upon the discussion of these eight sources of

evidence, I want first to lay down the fundamental law of the evolution of organisms as taught by its votaries. Haeckel says: "The history of the evolution of organisms consists of two kindred and closely connected parts. Ontogeny (which is the history of individual organisms) and phylogeny (which is the history of the evolution of organic tribes). Ontogeny is a brief recapitulation of phylogeny, dependent on the physiological function of heredity (reproduction) and adaptation (nutrition). In other words, the individual organism, in the embryotic state, reproduces in the rapid and short course of its own evolution the most important of the changes in form through which its ancestors, according to the laws of heredity and adaptation, have passed in the slow and long course of their paleontological evolution." This is their law. He adds: "There is apparent contradiction to this law; for instance, it will not follow this a, b, c and d, in a regular chain of ancestral form, but the chain may be represented more like this—a, c, e, g, and so on—showing that several evolutionary forms have been dropped out, but the evidence is there, for we are able to bridge over the greater part of these gaps satisfactorily by the help of comparative anatomy. It is therefore important that we become acquainted with some of the lower forms of animal life."

Having thus given you the fundamental law of this doctrine, I will now go back to our eight counts:

1st. "The evidence from the geographical distribution of animals and plants." It is a well-known fact that certain animals and plants are adapted to life in a cold, temperate or hot climate—some to life on the plains, some to life in the forests, some to life among mountains. This adaptation is claimed to be self-evidence, showing that the animal has originated and existed in certain limits; the climate suits the organic life found in it, therefore the organic life was, through the fundamental laws of evolution, heredity and adaptation, manufactured to suit the climate and soil. There alone it has ever existed, and nowhere else; there it does exist, and nowhere else. Now, this seeming adaptation is not fully and invariably established; for instance, the English sparrow and the European horse flourish more abundantly in this country, to which they have been imported, and not originally found, than they do at home; and, again, the African man, ape or monkey, or whatever he may be (I mean the "nigger"), seems to be larger, stronger and more intelligent in North America than in his native jungle in the wilds of the Dark Continent; and, again, the soil, climate and flora of Africa is the same as South America, yet the animal life is totally different; again, the physical features of Australia

is almost identical with Africa and South America, yet no country has animals like those found in Australia. So much for No "1."

2nd. The evidence from the geological succession of animals and plants. The various fossiliferous rocks of the paleolithic, mesolithic and canolithic epochs, reveal that animals of the same species and like form have generally inhabited the same localities that they now do, showing the adaptation to climate of certain animals; again, there are found fossil remains of animals, now extinct, in the paleolithic or primary state, that resemble some of the animals now extant. This is only going back a little further with the first count, which we think we have fully answered.

The fossil remains of bird-like reptiles and reptile-like birds, seems to be a more convincing evidence of the doctrine of evolution than geological succession, as they have a right in this instance to claim a common parent for these vertabrate, as they are to this day very similar in the manner of their reproduction. And again, the recent discoveries by the American Paleontologists of the series of fossil species of hipparion, anchitherium, eohippus, miohippus, neohippus and equus, show all the stages in the evolution of the horse with a completeness which leaves nothing to be desired. This all looks very convincing, and with years of study they have built up, and now let me tear down. Among the fossil remains of prehistoric or extinct animals, the great Agassiz found the bones of some of our most common animals, thus knocking into a total wreck the theory of a life time. Again, the world was once a ball of fire; it came from anywhere, somewhere, nowhere; it had no creation, it is, it was, and always will be. It began to cool down where? In its center? They say upon its surface. Then we ask why is it that the first foot of strata is situated 130,000 feet below us? Why is it that the first 70,000 feet of the archilithic or primordial epoch lies below the 60,000 feet of the three remaining epochs? If the earth has cooled down from the surface towards the center, why is it that the first foot of rock, coal, chalk, clay, or what not, is not on top, instead of 130,000 feet below? We ask in thundering tones, why? They smile and answer: The first thing that cooled down was water, that great and abundant element. This water occupied the whole entire surface of the earth, (I said earth inadvisedly, because there was no earth,) but the water covered the ball of fire; in other words the ball of fire was inside a circle of water that hung around it like the peel around an orange. So. Well, things began to get cool in places under this water; of course the water was hot and steamy, bound to have been, the fire would break through in places and shoot up melted matter

and one stuff and another, which would run out in the water, cool down and sink to the bottom, and as it would run down the sides of itself, the side next to the water would cool, and so mountains would form, as this went on the stratas would rise and the waters would recede and thus the world evolved.

In this archilithic, or primordial strata, no fossil has ever been found. In the next—the paleolithic—there is an abundant fossil of aquatic variety. In the next—the mesolithic—the fossil is quite numerous and of great variety. In this epoch we have, it is claimed, forests of pine. If we have forests of pine we must have soil, the water has receded, and “ooze,” as Huxley loves to call it, has got to climb up grade and out on dry land to build the 3000 feet of the following epoch.

All this is ten thousand times more than foolishness. We all know that water is one of the products of combustion, but that water is not going to stay around where this combustion takes place unless confined, it makes its escape as steam, there was nothing to confine the water to or near this ball of fire, as it went whirling its way through endless space. If it rose into the surrounding atmosphere, been congealed and attracted back to our planet by gravity, coming in contact with a red hot surface, it would have been converted again into steam, and if this action had been continued through millions and millions of years until something cooled down, it would have been first the external coating of this ball of fire in its first foot instead of its 130,000th foot.

And as for these fossil remains, that show that other animals than are have been, does not go to prove that these that are were not in existence then, for fossil of animals now extant have been found in all these many strata. So much for the second count.

Third. The evidence from homology or fundamental similarity of plan. Man, like all other animals, is built upon a universal plan, similar in all its fundamental principles and details to all, or nearly all, living things. He has, like other animals, organs of alimentation, of circulation, of sense and of reproduction; like some, he has limbs of locomotion and prehension, moved by sets of muscles almost identical with the lower animal kingdom, then of necessity, he must be akin to these four-footed and four-handed brothers a step or so below, so be it, say he is an animal of the same order, family, specie or grade, let us admit that he has, like other animals, eyes, mouth, ears, limbs, etc., does that signify that man descended from them? Nay, verily. For instance, we will take the domestic cat and the Bengal tiger of India, there is no difference at all in the two animals, every feature, every

limb, the whole form is exactly alike, even the movements of the two animals are the same, then if they had a common parent away back in the millions of years ago, why do we find one so small and puny and the other so large and strong? It was not a freak of nature, for each are now a distinct race and reproduce after their kind. It was not because of their manner of living, they are both carniferae; it was not because of the survival of the fittest, they have both survived; it was not because of heredity and adaptation, they are identical in their habits, and the one is no improvement on the other except in size; there were no changes made of form or feature if this be a case of evolution, and as for similarity of plan, this is the plainest case on record. Which descended from the other, the tiger or the cat? If similarity of plan is an evidence, they must answer. If we are retrograding, the cat has only changed in size, and all other animals descend from man. If we are progressing, the tiger has only changed in size, while man, (though smaller than an elephant,) is such an improvement over that clumsy brute who stands in the highest grade of all animals, is quite changed in form and feature. There seems to be an exception to their infallible rule in the case of the cat and the tiger. Well, so much for the third count.

Fourth. "The evidence from rudimentary organs." The fundamental plan of structure of a group of animals is often adhered to when there is, seemingly, no sense in it. For instance, we have in one species rudiments of parts which are of functional importance in another species. Take for example the coccyx of man, which is a rudimentary tail; we have no use for this tail, and if we did, it is too short for any such purpose as our monkey ancestors put theirs to, yet we've kept a few joints in spite of adaptation merely to show that our progenitors had more.

To medical men this rudimentary organ business is all foolishness. Gray in his matchless work on anatomy, Dalton on physiology, and Playfair on obstetrics, tell us of the use of the human coccyx, as well as all the rest of the so-called rudimentary organs, and not one but has important anatomical relations and relative functions. There again the "rudiments" stand out against the teachings of their own doctrine, for they claim that when an animal had no further use for a thing it dropped it. "Adaptation," for instance. The fish took a notion it would roam around on land, it tried it a while, found out it needed legs and forthwith grew them, casting aside its fins and became an amphibia. Finally, it got tired of the water altogether and quit it, the webb was cut out of his toes, and it was given claws, etc.,—evolution. In fact, this evolution goes right along and gives the animal

what it wants to suit the life its inclination leads it to follow, how it does it, they don't even pretend to try to explain, it only requires time, they say, its gradual change taking thousands of years to accomplish, yet whether this change takes place in the embryo or the full grown and completely matured animal, they say they don't know, and I guess they don't.

Well, when the animal ceases to have further use for an organ or member, having adapted itself to a different life, they say that organ is gotten rid of by evolution. What about the dog's tail or the goat's tail, the ass's ears, or the camel's hump, or the horse's main, they are of no earthly use to these animals, yet they have carried them for thousands of years and are apt to carry them thousands more without change. So much for the fourth count.

Fifth. "The evidences from embryology." This is the stronghold of evolutionists. Because man is reproduced like all placental animals, and more nearly like the apes, because he originates first as an egg, unicellular with nuculeous and nucleolus, because at the beginning of the growth of the embryo it resembles anything else than man; man is therefore an animal like all the rest, from which by process of evolution he has sprung.

We will here again call your attention to a part of the fundamental law of evolution, viz: "The individual organism (embryo) reproduces in the rapid and short course of its own evolution the most important of the changes in form, through which its ancestors, according to the laws of heredity and adaptation have passed in the slow and long course of their paleontological evolution."

Now to begin, the human egg or ovum, is a simple cell like all the cells that compose the body, and not only that, but it is like those in all mammals, birds and reptiles and a great many fishes, so much so (in their primitive state) that the most powerful microscope has detected no material difference. Then the development of a highly complicated, fully organized and perfect animal from so simple and unorganized a source, is one of the greatest wonders of nature, and has always attracted the attention of thinkers.

At the end of the last century evolution was advanced as the true theory of this phenomenon, that is, that the egg contained the living embryo already formed, like the acorn contained the little oak or the pupa the butterfly, and the development was simply the unfolding or evolution of this fully formed embryo into mature animal life.

The process was regarded not as a production but an eduction, this theory of course, being found incorrect, as the microscope revealed to them, that the embryo is built up *out of*, and not unfolded *from* the

egg, and that the development of the embryo is merely a process of cell multiplication governed by the special function of reproduction. Then evolutionists began the study of embryology, and now say they have stronger evidence than ever that man sprung from the low organisms. Note their fundamental law.

In this simple unicellular egg they find a resemblance to the amibæ, the lowest form of animal life. The next step, the human embryo, originally consisting of two given layers, then it may be safely inferred, they claim, that man sprung from some ancient ancestor, that consists only of two simple layers, like the Gastræ and Ascidian of to-day. These two germ-layers, Huxley says, is found in all animal life except the primary or protozoa.

The next step shows the primitive formation of the intestinal tube and notochord, showing we get our origin from worms. Another step, the vertebra in its most primitive form is developed, showing our relation to the amphioxus. Again the gill arches form and rudimentary limbs, showing that we have necessarily come down from the fishes and the amphibia. We have in this stage also developed a tail, showing we are descendants of all animals that wore tails. Another strong evidence in embryology is the great similarity between the embryos of the different animals which is mentioned even up to the 5th week. The ox, rabbit, dog, horse, pig, sheep or any of the other large mammals have the same appearance in embryo as man, and this is the evidence from embryology.

We first ask a question in beginning our animadversion upon this evidence: If the human egg, so like all the eggs of living beings, as these morphologists claim, is an unspecialized cell, which does not differ in any essential particular from other cells of the body, and the embryotic formation is due to cell multiplication simply, then how can we account for it, that the human egg produces man, while the egg of an oyster produces an oyster? This cannot be due in every instance to surrounding influences or the action of external circumstances, for among the lower animals the eggs are discharged from the body and thrown out into the water before development begins, or even in some, impregnation by the male, and yet we may rear under the same conditions and surroundings in one tumbler full of sea water, animals as different as star fish, crustacean, mollusks and vertebrate. How do they answer this? How shall they explain? They have never done so. There is but one explanation. The germ is not an unspecialized cell, but that in some shape or other the mature organism is latent or dormant in it.

The first great truth that strikes us as an indisputable fact, when

we enter into the study of the physiology of reproduction is, "that like begets like." This rule has never varied since the beginning of the history of the world. Then, if these are facts, that the germ is a specialized cell, producing in the progeny the counterpart of the parent, there is not, nor has there ever been in the embryo, any of these changes that have been produced by evolution from the protozoa to man. Then when did these changes take place? In the fully organized and thoroughly developed animal? It must have been if at all. So much for the fifth count.

Sixth. "The evidence from classification." Certain animals are more closely related than others in their forms, habits, etc., and are therefore classed and divided into groups, or families, or tribes, such as the cat tribe, to which belong the lion, tiger, panther, leopard, etc., another, the dog tribe, to which belong the wolf, jackall, hyena, etc., and so on, beginning with the lowest animal group and bringing them up by gradation until they reach the last and highest, or ape tribe, in which man is placed as the most exalted member, the greatest achievement of evolution. This arrangement has been made by zoologists and naturalists after years of hard study into all the habits, natures and anatomy of these different animals, and they deserve great credit for the immense amount of work they have done, but it is a self-evident fact that man does not belong to the last named group. Man is a group to itself, to which belong the North American Indian, the Malay, the Caucasian, the Mongolian, the Negro, etc. To prove this, the physical differences are so great it would be unnatural, and totally against the rules and laws governing the classifications of animals, to put man in the same group with the gibbon, the gorilla, the chimpanzee or the orang outang. In the first place man has no hair to amount to anything, while these animals are thickly coated. What removed our hair? Adaptation? The negro lives next door neighbor to these apes, and he has less hair than all the rest of the man tribe, in fact, he has no hair at all, it is a kind of wool, and a poor article of wool at that.

Some say because man wears clothing the hair left him. Statistics show to-day, that at this time, the latter end of the nineteenth century, when civilization has supposed to have reached the very zenith of its glory, that 500,000,000 people cover their bodies entirely with clothing, 700,000,000 only parts of the body, and 250,000,000 go entirely naked, and the latter has less hair than the former.

Again, the formation of their limbs are as different as the kangaroos and the mole. Man has long posterior (nether) limbs, with a long, slim foot and short toes without prehensive power. The anterior

(upper) limbs of man are shorter, with a hand supplied with four fingers and a thumb, capable of the highest known power of prehension. Man walks only upon his posterior or lower limbs, making no use whatever of his anterior or upper limbs in the act of locomotion. So different is the hand and foot of man, they are called the human foot and the human hand. On the other hand, apes walk on "all-fours," the anterior limbs are much longer than the posterior; they have hands on all their limbs capable of slight prehension; they have no thumbs. I mention these few differences in the anatomy of the ape and man, not because they are all, but because they are great, and in themselves sufficient to "class" the two in separate groups. There are yet marked differences such as the knee joint, the mamory glands, the lower jaw, etc., and as to the habits of the two animals, this is so apparent to any one that it is useless to note the difference here, suffice it to say, they are as different as day and night. There is no use to enter into psychological and spiritual distinctions here. They are well understood and admitted even by evolutionists themselves. So it would seem that little can be gained by classification, for man is a class of its own as above proved. So much for the 6th count.

Seventh. "The evidence from variation." The differences in a single tribe of animals is in many instances so slight that naturalists are often at a loss to tell which is the original and which the variety, and so from one tribe to the next tribe below or above as the case may be the variations are so slight in some cases that even in the last few years naturalists have changed one animal from this group and put him in that to get him fixed, showing that animals are so near alike they must have sprung from a common origin; or again, the variation even in one class of animals, in other instances, are so great that the variation from the ape to man they claim is nothing in comparison; for instance, they have put the hog, the tapir, the rhinoceros and the elephant in the same group. These animals, while in some respects they are very much alike in form and feature, are widely different.

Darwin, in his theory of descent, claims that "heredity" and adaptation have worked the necessary changes, and in connection with a "survival of the fittest," has brought about the evolution of man.

Speaking of a "survival of the fittest," it would seem from Haeckle, that the "fittest" has not "survived."

He says on the 25th page, vol. 11: "Evolution of Man," "the point to which I would specially call your attention is, that the direct descendants must never be confounded with the collateral lines, nor extinct with the extant forms; for instance, it is said that human beings are descended from apes, apes from pouched animals, and so on.

Many people think only of the living species. Now our opponents attribute this erroneous view to *us*, and with more craft than judgment, ask us to transform a kangaroo into a monkey, a monkey into an ape, an ape into a man. The conception is erroneous.

These extant forms have varied more or less from their common parent form, and none of them are capable of producing the same divergent posterity which were really produced thousands of years ago by the parent form." It would seem by this, that the fittest has not survived, and evolution has in this day and time lost the power to evolve. Again, he says, on page 26th, same book: "It must be accepted as quite a universal fact in phylogenetic evolution, that the parent forms themselves with their specific characters became extinct at a more or less distant period, and these extant forms come nearest to them, yet differ from them more or less, perhaps even very essentially." "Yet," he says again on page 28, same vol: "It must be clearly understood that the living forms which have been mentioned, are side branches, which are more nearly allied and similar to the extinct parent forms, that we should class them both in one and the same order, if we had the latter before us in the living state."

Any one can see from the foregoing that this is mere speculation and altogether unscientific reasoning.

Again, on page 38, same book, Haeckle says: "We can never, in any case, prove the whole ancestral line of ancestors of an organism with the same certainty with which we regard the theory of descent as the only scientific explanation of the organic forms. On the contrary, the special proof of all separate parent forms, must always remain more or less incomplete and hypothetical." And again, he says, same page: "Above all, Paleontology, the most ancient of all records of creation, is in the highest degree incomplete."

It seems useless for me to add any further comment on expressions of this kind, coming as they do, from one of the strongest advocates of evolution now living, and yet from this *incomplete record*, he tries to persuade us into a belief in this doctrine, and says that if we do not, we have no other recourse than to pin our faith to a supernatural miracle, which is wholly unscientific. "We will now leave the 7th count and take up the—

Eighth. "The evidence of organisms which have been modified under domestication."

There is no doubt but that animals and plants have been modified to some extent by selection, training and feeding, but they have never changed the dog's form so much, but that the smallest child can tell that it is a dog—from the "St. Bernard" on down to the "bench-

legged fice ;" nor the hog so much, but that it is easily recognizable from the "Pole and China" down to the "Pinywoods razor back." Greater differences have been accomplished in plants, but I'm dealing strictly with animals, and I repeat that these modifications are worthless as an evidence for evolution. So much for the 8th count. Then to recapitulate. Man sprang from an ape, the ape from a monkey, the monkey from a kangaroo, the kangaroo from a playtipus or duckbill, the playtipus from a salamander, the salamander from a mud fish, the mud fish from a ganoid fish, the ganoid from a mucous fish, the mucous fish from an amphioxus, the amphioxus from a worm, the worm from a gastræ, the gastræ from an amabæ, the amabæ from the monera, the monera from protoplasm, the protoplasm from—where? They say from spontaneous generation, spontaneous generation? When, how, where? When the time came, away back yonder in the primary epoch of the world, a little carbon-monoxide and nitrogen and hydrogen-dioxide got together and by a peculiar chemical process of its own, an art that is now classed among "the lost," produced "plasson" or "primitive slime," which floated around in the water and lived and had its being, the Adam of evolution, the first parent of the human family. And, if you don't believe this, you've got no science to go by, and you are left; in fact, you've got no progenitors, no ancestry, no parentage. You never was, you never will be, unless you can see through this millstone of spontaneous evolution with both eyes shut; that is if you are "science"—now if you arn't "science," why of course, you can believe that the world was created by some higher power, and that each living thing is a special act of creation.

The question, finally resolves it down to God or no God, the very point that all these writers want to bring us to. Whether it is nobler in the minds of men to be a thoroughly "scientific" organism with an ancestor of "slime," or believe in the "unscientific" idea that we are made in the image of the Divine Creator after the fashion of Adam, the first man.

The belief in a God, my hearers, must be derived at by analogy, rather than by assertion, since no man has seen God.

Man, in his marvelous mechanism, in his splendid social and his most wonderful mental attributes, tells to my mind, in thundering accents, of a masterly creation, and not a gradual evolution.

What evolution could give to the monkey's feeble foot, the wonderful adaptation of the human thumb? or produce from this crude organism the mighty brain of a world-famed Webster?

What evolution could give it the inventive genious of a Franklyn, a Morse or an Edison? Men who have caught the lightening from the

angry clouds, and bade it tamely carry burdens beneath the seas and over the wire belted earth? What gradual change could unbridle the ape's chattering tongue and make it speak the thrilling sweetness of a Prentis or sing the heaven-born notes of an Abbott?

What evolution could change the grinning gorilla into a Dageurre, who, with heaven-aspiring might, captured a ray of light and chained it down forever? What evolution could have changed the hideous chimpanzee into a Helen, a Cleopatra, or a Jersey Lilly?

What evolution could give to the filthy orang outang the eloquence and urbanity of D'Orsey or a Chesterfield? Or what accident could have made the millions of worlds that nocturnally sparkle on the brow of Eve, like orient gems at random strung?

What accident could engineer the impetuous comet in its limitless flight through boundless space, or guide the moon in her quiet trips around the earth every month with phlegmatic precision?

What accident could have reached out into the mighty distance of 872,000,000 of miles and fashioned the glorious planet Saturn, with her eight revolving moons engirdled with magically beautiful circles of gold? A billion of miles further on is Uranus, with her six attending worlds; and yet further on, 2,746,000,000 of miles, in endless space, is Neptune, sweeping round its stupendous orbit with a hundred times the velocity of a cannon ball—and all, all in unbroken harmony.

Then who can blame the poor heathen for bowing down in humble worship before the fiery orb of day. Vast enough for Jupiter, itself larger than the combined planetary system to revolve in forever and be lost in immensity. Whithersoever the contemplative mind may soar, there we read the wisdom, strength and beauty of Divine presence; whether viewed through the telescope, the microscope, or the naked eye, we find the universe moving in the symmetrical beauty of an Almighty power.

Geometrical precision rounds up the dew drop, and bends the thundering Niagara into graceful curves, and paints too upon the canvas of a summer shower, that beautiful bow of Divine promise.

Then who can doubt the existence of an all creative God—the one great architect of the universe—and who is not appalled at His mighty foot-prints. Everything above us, around us and beneath us, proclaim in echoing, and re-echoing tones, the power, the presence and the necessity of Jehovah—

•
OUR GOD.

